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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/531,101

Applicant(s)

AALTONEN, JANNE

Examiner

LUAT PHUNG

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/25/2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16, 17 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16, 17 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's arguments filed on March 25, 2008 have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The rejections and/or objections in this office action are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

2. In the remarks, applicant states that "claims 1-9, 11 and 16-17 are amended, and new claims 19-22 are added." Applicant is respectfully requested to state where the new limitations to the claims are supported in the specification, in particular amendments that change the scope of the claims, such as claims 1, 17 and 19-22, *inter alia*.

3. Regarding claim 9, applicant argues that:

Original claim 9 recited, among other features, the following: "wherein the group is limited to further hosts with a same locational area as the first host." The Office Action alleges that Applicant's specification, at paragraphs 6 and 7, allegedly admits that such a feature is already in the prior art. However, no such admission is made. To the contrary, those paragraphs make no mention whatsoever of limiting a group to hosts with a same locational area as the first host. Indeed, those paragraphs do not even refer to a "locational area" at all. If this rejection is maintained, Applicant requests clarification as to where, precisely, the allegedly-admitted prior art "locational area" is found.

Examiner respectfully disagrees because:

As a recap of the rejection of claim 9, AAPA discloses the hosts receiving data in a radio access network (RAN) (Fig. 1, hosts 3a, 3b, 3c inside RAN 5; para. 4). It is obvious to one of ordinary skill in the art at the time of the invention that the hosts are in the same location area (of the RAN) in order to establish radio communication to receive data from the cell (Fig. 1, element 8) in the RAN.

4. Regarding claim 11, applicant argues that:

Claim 11 recites the following: wherein one or both of the request and the file is transmitted between the network element and the first host via a cellular communications network and the locational area is defined in terms of a cell, and the group is limited to hosts situated in an area covered by a single cell. The Office Action cites Applicant's Figure 1, elements 5 and 8, and paragraph 4 as allegedly admitting that such a group is limited to hosts situated in an area covered by a single cell. Office Action, p. 7-8 (addressing claim 3). Applicant's specification makes no such admission. In Figure 1, element 5 is simply the radio access network. This is briefly described in paragraph 4, and nowhere in that description is there any reference to a cell, or an area covered by a single cell, as recited. Indeed, paragraph 4 expressly refers to multiple transmitters 8 being in the system. What is allegedly the admitted cell, and where is there an admission as to limiting the group to hosts situated in an area covered by a single cell, as recited? Applicant submits that no such admission is made.

Examiner respectfully disagrees because:

As a recap of the rejection of claim 11, AAPA discloses the hosts receiving data in a radio access network (RAN) (Fig. 1, hosts 3a, 3b, 3c inside RAN 5;

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para. 4). It is obvious to one of ordinary skill in the art at the time of the invention that the hosts are in the same location area (of the RAN) in order to establish radio communication to receive data from the cell (Fig. 1, element 8) in the RAN.

5. Regarding claim 12, applicant argues that:

While the concept of header encryption referenced in the Office Action may be better known today, the present application has a priority date as early as 2002, and Applicant submits that the alleged header encryption was not so commonly known, and respectfully requests under MPEP 2144.03 that the Examiner provide evidence in the next Office Action to support the Official Notice.

Examiner respectfully disagrees because:

Per applicant's request, a prior art reference has been provided that discloses this obvious, well-known limitation. As a recap of the rejection of claim 12, Chang from the same or similar fields of endeavor discloses encrypted headers containing sequence numbers to detect missing components in the data sequence (col. 12, lines 18-35).

6. Regarding claim 13, applicant argues that:

As another example, claim 13 recites "where a further host has submitted a request during the file delivery transmission, logging the point in the file delivery transmission at which said further host joins the group." The Office Action again takes official notice, this time alleging that the general concept of logging was known. Applicant submits that, even assuming that logging communications in general was known, there is no need in Chuah et al. for such an action. Chuah et

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al. notes that some clients may miss blocks when they join during the datacast, and it is up to those clients to transmit a status signal indicating that not all blocks were received. Chuah et al., col. 5, line 64 - col. 6, line 3. There is no need to modify Chuah et al. in the manner suggested, because to do so would simply waste resources, and doing so would impermissibly change the principal of operation by which the Chuah et al. system operates (without logging).

Examiner respectfully disagrees because:

Per applicant's request, a prior art reference has been provided that discloses this obvious, well-known limitation. As a recap of the rejection of claim 13, Peterka from the same or similar fields of endeavor discloses recording the time when a client joins and leaves the multicast (para. 80).

7. Regarding claim 19, applicant argues that:

New claim 19 recites "after all hosts in the group have successfully received the file, maintaining the group active for a predetermined amount of time; and terminating the group after the predetermined amount of time if no additional host issues a request for the file." Chuah et al. offers no teaching or suggestion of such a predetermined amount of time (see col. 7, lines 51-55 - server terminates the TCP connection once the last client separates from the tree), and Applicant's specification makes no admission in this regard.

Examiner respectfully disagrees because:

Applicant's argument is moot in view of the new ground of rejection for the new claim.

8. Regarding claim 21, applicant argues that:

New claim 21 recites "wherein each host in the group is allocated an amount of bandwidth on a network on which the file delivery transmission occurs, and the processor is further configured to: share allocated bandwidth of multiple hosts in the group to increase a data transfer rate experienced by the hosts in the group." No such sharing or increase in a data transfer rate is shown in the cited reference. For example, each new client in Chuah et al. that joins the multicast establishes its own separate TCP connection. Chuah et al., col. 5, line 46 (total of $N+1$ connections for N clients).

Examiner respectfully disagrees because:

Applicant's argument is moot in view of the new ground of rejection for the new claim.

9. Regarding claim 1, applicant argues that:

None of the applied references teach or suggest such an apparatus, which is configured to "determine whether the second host is situated with a locational area of the first host." As discussed above, the Office Action cites a portion of Applicant's specification as allegedly admitting a locational area, but no such admission is made, and no such feature is shown in Chuah et al., either.

Examiner respectfully disagrees because:

As a recap of the rejection of the amended claim 1, AAPA discloses the hosts receiving data in a radio access network (RAN) (Fig. 1, hosts 3a, 3b, 3c inside RAN 5; para. 4). It is obvious to one of ordinary skill in the art at the time of the invention that the hosts are in the same location area (of the RAN) in order

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to establish radio communication to receive data from the cell (Fig. 1, element 8) in the RAN.

Additionally, as an alternative rejection to this limitation, Sachs from the same or similar fields of endeavor discloses:

e) if the second host is situated within the locational area of the first host (multicast group consisting of receivers located in the same cell per para. 17, 48).

10. Regarding claim 17, applicant argues that:

None of the applied references teach or suggest the claim 17 method, with the above features. Chuah et al. does not describe using a cellular telecommunication network to request to join the group. To the contrary, Chuah et al.'s Figure 4 structure shows the use of the same network for both the request and the TCP connection.

Examiner respectfully disagrees because:

Applicant's argument is moot in view of the new ground of rejection for the amended claim.

Claim Objections

11. Claims 1 and 12-14 are objected to because of the following informalities:

Claim 1 is tagged as Previously Amended, which does not appear to reflect the proper status of the claim, i.e., Currently Amended.

Claim 12-14 is tagged as Previously Amended, which does not appear to reflect the proper status of the claim, i.e., Original. Additionally, claim 12 recites "the correct order" in line 2. There is insufficient antecedent basis for this limitation in the claim.

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Appropriate correction is required.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claims 1, 3 and 4 are rejected under U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (US Pub. 2006/0034313, prior art description in instant application) in view of Sachs, et al (US Pub. 2006/0154603).

Regarding claim 1, AAPA discloses a multicast-enabled network element (Fig. 1, element 7) comprising:

a first logical interface (Fig. 1, element 6) configured to receive a file from a content provider (Fig. 1, element 2; para. 4, 7);

a second logical interface (Fig. 1, element 9a, 9b) configured to forward the file to one or more hosts (Fig. 1, elements 3a, 3b, 3c) as a sequence of data packets (A-E per Fig. 1) in a file delivery transmission (para. 5, 7); and

a processor (router per para. 5) configured to perform the following:

a) receive a first request for the file from a first host; (para. 3)

b) define a multicast delivery group including the first host; (para. 3)

c) receive a second request for the file from a second host during file delivery transmission of the requested file to the first host; (third host requesting a file after the start of the transmission para. 8)

AAPA does not explicitly disclose:

d) determine whether the second host is situated within a locational area of the first host; and

e) if the second host is situated within the locational area of the first host, add the second host to the multicast delivery group, and cause the transmission of a remaining portion of the requested file to both first and second hosts after adding the second host to the multicast delivery group.

However AAPA discloses the hosts receiving data in a radio access network (RAN) (Fig. 1, hosts 3a, 3b, 3c inside RAN 5; para. 4). It is obvious to one of ordinary skill in the art at the time of the invention that the hosts are in the same location area (of the RAN) in order to establish radio communication to receive data from the cell (Fig. 1, element 8) in the RAN.

Additionally, as an alternative rejection, Sachs from the same or similar fields of endeavor discloses:

e) if the second host is situated within the locational area of the first host (multicast group consisting of receivers located in the same cell per para. 17, 48).

Sachs further discloses add the second host to the multicast delivery group (additional receiver joining an ongoing multicast session per para. 75), and cause the transmission of a remaining portion of the requested file to both first and second hosts (all data blocks received per para. 79) after adding the second host to the multicast delivery group (additional receiver able to receive data per para. 75).

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention to combine AAPA's multicast method with Sach's approach to adding to a multicast group by allowing hosts to be joined during transmission of a file, and ensuring all packets are received by these hosts. The motivation for doing so would have been to improve reliability and flexibility of file delivery to end users.

Regarding claim 3, AAPA further discloses wherein the apparatus is further configured to transmit one or both of a request and the file between the apparatus and the second host via a cellular communications network and the locational area is defined in terms of a cell, and the group is limited to hosts situated in a locational area covered by a single cell. (hosts receiving data in a radio access network (RAN) of cellular network (Fig. 1, hosts 3a, 3b, 3c inside RAN 5; para. 4); it is obvious to one of ordinary skill in the art at the time of the invention that the hosts are in the same location area (of the RAN) in order to

establish radio communication to receive data from the cell (Fig. 1, element 8) in the RAN).

In an alternative rejection, Sachs further discloses wherein the apparatus is further configured to transmit one or both of a request and the file between the apparatus and the second host via a cellular communications network (para. 46) and the locational area is defined in terms of a cell, and the group is limited to hosts situated in a locational area covered by a single cell (para. 48).

Regarding claim 4, AAPA further discloses further configured to forward the file to the second host over a wireless communication network, being the last network element situated before an air-interface in a file delivery path between the content provider and the second host. (Fig. 1, elements 2, 5, 7, 3a, 3b, 3c; para. 4)

15. Claims 2, 7 and 8 are rejected under U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art in view of Sachs, et al, in further view of Chuah, et al (US 6,515,994).

Regarding claim 2, AAPA discloses substantially all of the subject matter as recited above. AAPA further discloses further configured to transmit the file via a first communication network (para. 8). AAPA does not explicitly disclose receive the second request from the further host via a second communication network. Chuah from the same or similar fields of endeavor discloses receive the second request from the second host via a second communication network. (col. 3, lines 46-57) Thus it would have been obvious to the person of ordinary

skill in the art at the time of the invention to combine AAPA's multicast method with Chuah's approach to allow an additional file request from the second host via a second network. The motivation for doing so would have been to improve reliability and flexibility of file delivery to end users.

Regarding claim 7, the combination of AAPA and Sachs discloses substantially all of the subject matter as recited above except wherein the processor is further configured to repeat transmission of the file when a host is added to the group during a transmission of the file. Chuah from the same or similar fields of endeavor discloses retransmission of the file following the file delivery. (col. 5, line 52 to col. 6, line 17) Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention to combine AAPA and Sachs' apparatus with Chuah's approach to retransmit the file by repeating the file transmission. The motivation for doing so would have been to ensure full delivery of the file to users joining during a file transmission.

Regarding claim 8, the combination of AAPA and Sachs discloses substantially all of the subject matter as recited above except configured to receive a negative acknowledgement message and to treat the message as a request for the file. Chuah from the same or similar fields of endeavor discloses receiving status signal in the form of request for blocks not received and retransmitting the file. (col. 5, line 52 to col. 6, line 17) Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention to combine AAPA and Sachs' apparatus with Chuah's approach to re-request transmission by sending the status signal for retransmitting the file. The

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motivation for doing so would have been to ensure full delivery of the file to users joining during a file transmission.

16. Claim 5 is rejected under U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art in view of Sachs, et al, in further view of Chang, et al (US 6,963,972).

Regarding claim 5, the combination of AAPA and Sachs discloses all of the subject matter as recited previously in this office action except further comprising a file request handler configured to encrypt information in headers of the data packets relating to a correct order of data packets in the file delivery transmission. Chang from the same or similar fields of endeavor discloses encrypted headers containing sequence numbers to detect missing components in the data sequence (col. 12, lines 18-35). Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement the header encryption as suggested by Chang in the apparatus of AAPA and Sachs in order to detect tampering of the data and to ensure correct sequence of data is received.

17. Claim 6 is rejected under U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art in view of Sachs, et al, in further view of Peterka, et al (US Pub. 2002/0174366).

Regarding claim 6, the combination of AAPA and Sachs discloses all of the subject matter as recited previously in this office action except the processor

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is further configured to log a point in the file delivery transmission at which the second host is added to the group. Peterka from the same or similar fields of endeavor discloses recording the time when a client joins and leaves the multicast (para. 80). Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention to log the time of joining the multicast group as suggested by Peterka in the apparatus of AAPA and Sachs for billing purposes.

18. Claims 9-11, 14 and 16 are rejected under U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art in view of Chuah, et al.

Regarding claim 9, AAPA discloses a method comprising:

receiving a request for a file from a first host; (para. 3)

retrieving the file from a content provider; (para. 4, 7)

defining a group comprising the first host; (para. 3)

forwarding the file to the group as a sequence of data packets in a file delivery transmission; (para. 5, 7) and

AAPA does not explicitly disclose:

adding to the group any further hosts submitting requests for the file during said file delivery transmission whereby said further hosts receive remaining data packets in said file delivery transmission, wherein the group is limited to further hosts with a same locational area as the first host.

However AAPA discloses the hosts receiving data in a radio access network (RAN) (Fig. 1, hosts 3a, 3b, 3c inside RAN 5; para. 4). It is obvious to

one of ordinary skill in the art at the time of the invention that the hosts are in the same location area (of the RAN) in order to establish radio communication to receive data from the cell (Fig. 1, element 8) in the RAN.

Additionally, Chuah from the same or similar fields of endeavor discloses: adding to the group any further hosts submitting requests for the file (subsequent joining of destinations per col.3 , lines 46-57) during said file delivery transmission (transmission already in progress per col. 3, lines 46-57) whereby said further hosts receive remaining data packets in said file delivery transmission (until all blocks received per col. 3, lines 46-57).

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention to combine AAPA's multicast method with Chuah's approach to adding to a multicast group by allowing hosts to be joined during transmission of a file, and ensuring all packets are received by these hosts. The motivation for doing so would have been to improve reliability and flexibility of file delivery to end users.

Regarding claim 10, AAPA discloses substantially all of the subject matter as recited above. AAPA further discloses wherein the file is forwarded via a first communication network (para. 8). AAPA does not explicitly disclose the request from the first host is received via a second communication network. Chuah from the same or similar fields of endeavor discloses request from the first host is received via a second communication network. (col. 3, lines 46-57) Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention to combine AAPA's multicast method with Chuah's approach to

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allow an additional file request via a second network. The motivation for doing so would have been to improve reliability and flexibility of file delivery to end users.

Regarding claim 11, AAPA further discloses wherein the apparatus is further configured to transmit one or both of a request and the file between the apparatus and the second host via a cellular communications network and the locational area is defined in terms of a cell, and the group is limited to hosts situated in a locational area covered by a single cell. (hosts receiving data in a radio access network (RAN) of cellular network (Fig. 1, hosts 3a, 3b, 3c inside RAN 5; para. 4); it is obvious to one of ordinary skill in the art at the time of the invention that the hosts are in the same location area (of the RAN) in order to establish radio communication to receive data from the cell (Fig. 1, element 8) in the RAN).

Regarding claim 14, Chuah further discloses wherein the processor is further configured to repeat transmission of the file when a host is added to the group during a transmission of the file. (col. 5, line 52 to col. 6, line 17)

Regarding claim 16, Chuah further discloses a computer readable medium storing instructions to cause a network element to perform the method of claim 9. (col. 4, lines 27-41).

19. Claim 12 is rejected under U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art in view of Chuah, et al, in further view of Chang, et al.

Regarding claim 12, the combination of AAPA and Chuah discloses all of the subject matter as recited previously in this office action except further comprising encrypt information in headers of the data packets relating to a correct order of data packets in the file delivery transmission. Chang from the same or similar fields of endeavor discloses encrypted headers containing sequence numbers to detect missing components in the data sequence (col. 12, lines 18-35). Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement the header encryption as suggested by Chang in the apparatus of AAPA and Chuah in order to detect tampering of the data and to ensure correct sequence of data is received.

20. Claim 13 is rejected under U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art in view of Chuah, et al, in further view of Peterka, et al.

Regarding claim 13, the combination of AAPA and Chuah discloses all of the subject matter as recited previously in this office action except further comprising, where a further host has submitted a request during the file delivery transmission, logging the point in the file delivery transmission at which the second host is added to the group. Peterka from the same or similar fields of endeavor discloses recording the time when a client joins and leaves the multicast (para. 80). Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention to log the time of joining the multicast

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group as suggested by Peterka in the apparatus of AAPA and Chuah for billing purposes.

21. Claim 17 is rejected under U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art in view of Sachs, et al, and further in view of Bhagavath, et al (US 6,163,810).

Regarding claim 17, AAPA discloses a method comprising:

a host sending to a network element via a cellular telecommunication network a request to join a group; (para. 3)

receiving a start packet transmitted by the network element which configures a connection between the network element and the host; (para. 5, 7)

receiving a sequence of data packets transmitted by the network element in a first file delivery transmission; (para. 5, 7)

arranging the sequence of data packets in an appropriate order; (para. 5) and

AAPA does not explicitly disclose:

receiving a second file delivery transmission comprising the sequence of data packets;

wherein the host retrieves data packets that were dropped or missed in the first file delivery transmission by retrieving the corresponding data packets in the second file delivery transmission.

Sachs from the same or similar fields of endeavor discloses:

receiving a second file delivery transmission comprising the sequence of data packets; (para. 75, 79)

wherein the host retrieves any--data packets that were dropped or missed in the first file delivery transmission by retrieving the corresponding data packets in the second file delivery transmission. (para. 75, 79)

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention to combine AAPA's multicast method with Sach's approach to adding to a multicast group by allowing hosts to be joined during transmission of a file, and ensuring all packets are received by these hosts. The motivation for doing so would have been to improve reliability and flexibility of file delivery to end users.

The combination of AAPA and Sachs discloses all of the subject matter except receiving, via a different communication network from said cellular telecommunication network, a start packet transmitted by the network element. Bhagavath from the same or similar fields of endeavor discloses receiving a multicast request and selecting a multicast gateway to handle the request (abstract). Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention to receive a multicast request from a cellular network as disclosed by AAPA and Sachs and to select a gateway in a different network to handle file delivery. The motivation for doing so would have been to more efficiently utilize network resources.

22. Claim 19 is rejected under U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art in view of Chuah, et al, and further in view of Deng, et al.

Regarding claim 19, the combination of AAPA and Chuah discloses all of the subject matter as recited previously in this office action except further comprising:

after all hosts in the group have successfully received the file, maintaining the group active for a predetermined amount of time; and

terminating the group after the predetermined amount of time if no additional host issues a request for the file.

Deng from the same or similar fields of endeavor discloses a timer for the amount of time the group is active (multicast address remaining in MAC address table per col. 5, lines 49-57), keeping the multicast group active for a period of time when a host joins (multicast address stored in MAC address table and starting a timer per col. 5, line 58 to last line) and terminating the multicast group after a period of time when there's no further requests (multicast address removed from table when there's no request to join per col. 5, line 58 to last line). Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement the timer of Deng in the method of AAPA and Chuah by maintaining the multicast group active for a period of time until there's no further request for data. The motivation for doing so would have been to provide a robust and reliable transmission.

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23. Claim 20 is rejected under U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art in view of Sachs, et al, and further in view of Deng, et al.

Regarding claim 20, the combination of AAPA and Sachs discloses all of the subject matter as recited previously in this office action except wherein said processor is further configured to:

after all hosts in the group have successfully received the file, maintain the group active for a predetermined amount of time; and

terminate the group after the predetermined amount of time if no additional host issues a request for the file.

Deng from the same or similar fields of endeavor discloses a timer for the amount of time the group is active (multicast address remaining in MAC address table per col. 5, lines 49-57), keeping the multicast group active for a period of time when a host joins (multicast address stored in MAC address table and starting a timer per col. 5, line 58 to last line) and terminating the multicast group after a period of time when there's no further requests (multicast address removed from table when there's no request to join per col. 5, line 58 to last line). Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement the timer of Deng in the apparatus of AAPA and Sachs by maintaining the multicast group active for a period of time until there's no further request for data. The motivation for doing so would have been to provide a robust and reliable transmission.

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24. Claim 21 is rejected under U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art in view of Chuah, et al, and further in view of Virgile, et al (US 6,539,022).

Regarding claim 21, the combination of AAPA and Chuah discloses all of the subject matter as recited previously in this office action except wherein each host in the group is allocated an amount of bandwidth on a network on which the file delivery transmission occurs, and the method further comprises:

multiple hosts in the group sharing their allocated bandwidth to increase a data transfer rate experienced by the hosts in the group.

Virgile from the same or similar fields of endeavor discloses transmission of multicast messages by reducing transmission of unneeded multicast messages to conserve bandwidth (abstract; col. 6, lines 1-14). Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement the multicast transmission of Virgile in the method of AAPA and Chuah by reducing transmission of unneeded multicast messages in order to increase the data rate.

25. Claim 22 is rejected under U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art in view of Sachs, et al, and further in view of Virgile, et al.

Regarding claim 22, the combination of AAPA and Sachs discloses all of the subject matter as recited previously in this office action except wherein each

host in the group is allocated an amount of bandwidth on a network on which the file delivery transmission occurs, and the processor is further configured to:

share allocated bandwidth of multiple hosts in the group to increase a data transfer rate experienced by the hosts in the group.

Virgile from the same or similar fields of endeavor discloses transmission of multicast messages by reducing transmission of unneeded multicast messages to conserve bandwidth (abstract; col. 6, lines 1-14). Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement the multicast transmission of Virgile in the apparatus of AAPA and Sachs by reducing transmission of unneeded multicast messages in order to increase the data rate.

Conclusion

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (see form 892).

27. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

28. Examiner's Note: Examiner has cited particular paragraphs, columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and, also to verify and ascertain the metes and bounds of the Claimed invention.

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luat Phung whose telephone number is 571-270-3126. The examiner can normally be reached on M-Th 7:30 AM - 5:00 PM, F 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. P./

Examiner, Art Unit 2616

/Huy D. Vu/

Supervisory Patent Examiner, Art Unit 2616